

Attorney Docket No. P12128-US2

19. (New) The method of claim 7 wherein said first gateway is a Gateway General Packet Radio Services Serving Node (GGSN).

REMARKS**1.) Amendments**

The Applicants have amended claims 1 and 3-7 and claims 8-19 have been added. Accordingly, claims 1-19 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Claim Rejections – 35 U.S.C. § 112

The Examiner rejected claims 1-7 under 35 U.S.C. 112 as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is mostly nearly connected, to make and/or use the invention. The Applicants have amended the claims to better describe the claimed invention. The Examiner's consideration of the amended claims is respectfully requested.

3.) Claim Rejections – 35 U.S.C. § 102(e)

The Examiner rejected claims 1 and 4 under 35 U.S.C. 102 (e) as being anticipated by Sturniolo, et al. (US 6,201,962). The Applicants have amended the claims to better distinguish the claimed invention from Sturniolo. The Examiner's consideration of the amended claims is respectfully requested.

The Sturniolo reference discloses a gateway controller coupled to a plurality of Local Area Networks (LANs) for allowing a mobile terminal to communicate with a device coupled to the backbone network without the device having to know about the changes in the mobile terminal's network address. Accordingly, as the mobile terminal roams into a different LAN area and is assigned with a new network address, the other device in communication with the roaming mobile terminal is not informed of the

Amendment - PAGE 6 of 13
EUS/JIP/03-8822

Received from <9725837864> at 2/4/03 10:16:59 AM [Eastern Standard Time]

Attorney Docket No. P12128-US2

changed network address. The gateway controller in the Sturniolo invention automatically maintains the communication link.

However, Applicants respectfully submit that Sturniolo fails to disclose or teach a system wherein a tunnel is established between a first gateway associated with the first data communication network wherein a mobile terminal previously resided and a second gateway associated with the second data communication network into which the mobile terminal has recently roamed. In accordance with the teachings of the present invention and as further claimed by the amended claim, after the establishment of the tunnel between the first gateway and the second gateway, data packets intended for the roaming mobile stations are then routed from the first gateway to the second gateway over the established tunnel. Applicants respectfully submit that Sturniolo simply fails to anticipate or render obvious those novel steps as recited by independent Claim 1. Sturniolo does not describe or teach the steps of establishing a tunnel between two separate gateways and forwarding packets received by the first gateway to the second gateway over the established tunnel.

Claims 2-4 and newly added claims 8-15 are dependent on now allowable independent claim 1 and recite further limitations in combination with the novel elements of claim 1. Therefore, the allowance of claims 1-4, and 8-15 is respectfully requested.

The Examiner rejected claim 6 under 35 U.S.C. 102 (e) as being anticipated by White, et al. (US 6,069,890). The Applicants have amended the claims to better distinguish the claimed invention from White. The Examiner's consideration of the amended claims is respectfully requested.

Applicants respectfully submit that White discloses a system for providing telephone type services over the Internet. Particularly, the White reference discloses a system and method for permitting the setting up and carrying out a telephone call over the Internet from telephone station to telephone station without access to computer equipment and without the necessity of maintaining a subscription to any Internet service. However, White similarly fails to disclose or teach a tunnel being established between a first gateway associated with the first data communication network and a second gateway associated with the second data communication network as a mobile

Amendment - PAGE 7 of 13
EUS/J/P/03-8622

Received from <9725837864> at 2/4/03 10:16:59 AM [Eastern Standard Time]

Attorney Docket No. P12128-US2

station roams from the first network to the second network. Additionally, White fails to disclose data packets being routed from the first gateway to the second gateway over the established tunnel as recited by amended Claim 6. The White reference also fails to disclose or teach the step of the mobile device establishing a connection with the second gateway as claimed by Claim 6.

Accordingly, Applicants respectfully submit that White fails to anticipate or render obvious the present invention as claimed by Claim 6. Claim 18 depends from amended claim 6 and recites further limitation in combination with the novel elements of claim 6. Therefore, the allowance of claims 6 and 18 is respectfully requested.

The Examiner rejected claims 5 and 7 under 35 U.S.C. 102 (b) as being anticipated by Aziz (US 5,325,362). The Applicants have amended the claims to better distinguish the claimed invention from Aziz. The Examiner's consideration of the amended claims is respectfully requested.

Even though the Aziz reference may use similar language and terms as the present application, Applicants respectfully submit that the Aziz invention is quite different than the present invention as claimed. In Aziz, special routers called Mobility Support Border Router (MSBR) and Mobility Support Router (MSR) are provided in each of the service areas. In accordance with Aziz, each mobile host is assigned to a home network. Even after the mobile host travels out of the home network (area), an IP packet is first captured by an Mobility Support Router (MSR) in the mobile host's home area. The home MSBR then checks its internal table to see if the mobile host is currently located within its service area. If the mobile host is not located within its internal table, it then attempts to locate an MSR serving the mobile host by multicasting a "WHO-HAS" request (See Fig. 3). This WHO_HAS request will be answered by the home MSBR with an "OTHER HAS" response, indicating that another MSR is currently serving the mobile host. A communication channel (tunnel) is then established between the home MSBR and the serving MSBR. The serving MSBR will then similarly perform a local search for the mobile host by doing a local "WHO HAS" in case this information is not in the serving MSBR's cache. When an MSR serving the mobile host responds

Amendment - PAGE 8 of 13

EUS/J/P/03-8622

Received from <9725837864> at 2/4/03 10:16:59 AM [Eastern Standard Time]

Attorney Docket No. P12128-US2

with an "I HAVE" message, a tunnel will be established between the MSR and the remote MSR (Aziz, Col. 6, line 47- Col 7, line 50).

In accordance with the Aziz reference, whenever the mobile host travels into a new service area being served by a new MSR, a broadcasting of search request has to be transmitted by the MSBR and acknowledged by the serving MSR. Only after such a local search procedure, could a communication link be established with the mobile station.

On the other hand, in accordance with the present invention as claimed by Claim 5, as the mobile station travels out of a first data communications network into a second data communications network, a preferred gateway (second gateway) within the second data communications network is identified and selected. The traveling mobile station then attempts to initiate a connection request with the second data communications network for a second connection wherein such a request further includes an address of a first gateway associated with the first data communications network. Using the provided network address, a tunnel is directly established between the second gateway and the identified first gateway. The first gateway then forwards packets over the established tunnel to the second gateway in accordance with the teachings of the present invention. Accordingly, there is no need to broadcast "search messages" or perform search procedures to identify which gateway is currently serving the mobile station. The network address associated with the first gateway is provided to the second gateway and a tunnel established directly therebetween. Such information is provided by the mobile station to the second data communications network as part of its connection request as recited by Claim 5.

As a result, Applicants respectfully submit that Aziz simply fails to describe or disclose a system wherein a direct tunnel between two gateways serving two different service areas is established in accordance with the teachings of the present invention.

Claims 16 and 17 depend from amended claim 5 and recite further limitations in combination with the novel elements of claim 5. Therefore, the allowance of claims 5 and 16-17 is respectfully requested.

Attorney Docket No. P12128-US2

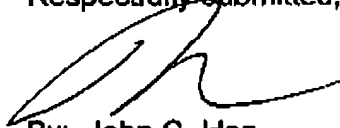
CONCLUSION

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1-19.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

Respectfully submitted,



By: John C. Han
Registration No. 41,403

Ericsson Inc.
6300 Legacy Drive, M/S EVW 2-C-2
Plano, Texas 75024

(972) 583-7686
john.han@ericsson.com

VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE CLAIMS:**

Please amend claims 1 and 3-7 as follows:

1. (Amended) A method of keeping a session active and connected with a mobile device while changing data communications networks, comprising the steps of:
receiving packets, associated with a session, over a first connection in a first data communications network;
requesting a second connection with a second data communications network while said mobile device is moving towards the second network;
acquiring an address of a second gateway associated with the second data communications network [, wherein said steps of requesting and/or acquiring use an unsolicited connection procedure; and] ;
establishing a tunnel between a first gateway associated with the first data communications network serving said first connection and said second gateway;
routing packets, associated with said session, by said first gateway over said established tunnel to said second gateway and over the second connection based on the acquired gateway address to said mobile device.
3. (Amended) The method of claim 1, wherein [a] said first gateway in the first data communications network initiates the request for the second connection.
4. (Amended) The method of claim 1, wherein [user equipment] mobile device initiates the request for the second connection.

5. (Amended) A method of keeping a session active and connected with a mobile device while changing data communications networks comprising the steps of:

- receiving packets, associated with a session, from a first data communications network;
- said mobile device moving from a first data communications network to a second data communications network;
- selecting a preferred gateway [in] within the second data communications network;
- initiating [an unsolicited] a connection request [procedure] in the second network for a second connection by said mobile device, wherein said connection request includes an address of a first gateway associated with said first network;
- establishing a tunnel between said first gateway and said preferred gateway;
- forwarding packets, associated with said session, to said preferred gateway [through said connection procedure] over said established tunnel; and
- said mobile device receiving said forwarded packets from said preferred gateway over said second connection.

6. (Amended) A method of keeping a session active and connected with a mobile device while changing data communications networks comprising the steps of:

- receiving packets, associated with a session, from a first data communications network;
- sending routing information from a gateway in said first network to one or more gateways in neighboring data communications networks [using an unsolicited connection procedure];
- establishing a connection between the mobile device [user equipment] and a second gateway, said second gateway being one of said one or more gateways in the neighboring data communications networks that is associated with a target cell;

Attorney Docket No. P12128-US2

establishing a tunnel between said gateway in said first network and said second gateway;

forwarding packets, associated with said session, from said gateway in said first data communications network to said second gateway over said established tunnel; and
receiving, in the mobile device [user equipment], said forwarded packets from said second gateway.

7. (Amended) A method of keeping a session active and connected with a mobile device while changing data communications networks comprising the steps of:

receiving packets, associated with a session, from a first data communications network;

sending a request for access, from user equipment receiving said packets, to a second data communications network;

initiating [an unsolicited] a connection procedure to a second gateway in said second data communications network;

returning an address of the second gateway in the second data communications network to said user equipment;

sending said address to a first gateway in said first data communications network;

establishing a tunnel between said first gateway and said second gateway;

forwarding packets, associated with said session, from said first gateway in the first data communications network to said second gateway in the second data communications network using said address; and
receiving, at said user equipment, the forwarded packets from said second gateway in said second data communications network.